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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,107	08/06/2001	William S. Yerazunis		9557

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Patent Department  
Mitsubishi Electric Research Laboratories, Inc.  
201 Broadway  
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EXAMINER

PATEL, SHEFALI D

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/923,107

Applicant(s)

YERAZUNIS ET AL.

Examiner

Shefali D. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 and 25-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 25-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Amendment*

1. The amendment was filed on July 5, 2005.
2. Claims 20-24 have been cancelled.

### *Response to Arguments*

3. Applicants' arguments with respect to claims 1-19 and 25-29 (Remarks on pages 7-19, especially the ones made with regards to reference of Cox) have been considered but are moot in view of the new ground(s) of rejection.
4. Although the arguments are moot in view of new ground(s) of rejections, there are some comments necessary for certain portions of the Remarks filed on July 5, 2005.

Applicants allege on page 7 that "the Cox method cannot display an image that is visible only to an authorized user. That would have no use." Please note that examiner read Cox's col. 2 lines 13-18 as displaying the image to the user and later explained the difference between 'authorized' and 'unauthorized' user (see previous office action).

Applicants' state on bottom of page 7,

"Cox does not disclose, describe, suggest or show images that are only visible to an 'unauthorized' user. The Cox watermark, to be of any value, must be visible to everyone. Instead, the purpose of the Cox watermark is to mark content as 'authorized'. Presumably, content without the watermark is 'unauthorized.' Authorized and unauthorized content do not make obvious authorized and unauthorized users as claimed."

The examiner would like to submit yet again that this argument is irrelevant as the limitations of claims do not recited "watermark." Please note that the at least independent claims 1 and 25 never say anything about "watermark" being visible or invisible to authorized or unauthorized users. The claims are given its broadest reasonable interpretation as instructed by MPEP 2111.

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Applicants' presents the "Invention" vs. "Cox" on page 8. Again, the examiner understands the invention of the applicants'. She also understands how the negation is being applied to the data image. However, the word 'negation' has multiple meanings, reverse, complement, invert, inverse, etc. Hence, the claim is very broad in that sense.

On page 10 of the Remarks, applicants' states

"There is no selection of images as claimed in Cox. The selection button in Tourai manually selects images. Tourai cannot be combined with Cox, which requires the selection of interlaced fields. With the Tourai device everybody sees nothing. Tourai is useless for solving the stated problem for displaying an image only to an authorized user."

The examiner agrees that Cox does not have any selection of images. That is why the examiner has brought in the secondary reference by Tourai. The motivation and obviousness reasons were given in the previous office action and will be again given in this office action below (with a different perspective).

With regard to claim 11 on page 11, applicants state,

"The Applicant cannot find the 'random generator' referenced by the examiner...the word "random" does not appear anywhere in Tourai."

The examiner respectfully disagrees. Yes, the word "random" does not appear in Tourai but the process of randomly generating (selecting) images does. Note, the examiner explained this in rejecting claim 11 stating, "the select signal is randomly generating the image on the display unit until a third party (i.e., unauthorized user) is viewing the image, then the select signal makes sure that the 'dummy' image is displayed." Tourai inherently meets (and it is obvious) this feature.

Applicant on page 12 states

"Applicant cannot find anything that relates to displaying image in a random order in the section of Tourai referenced by the Examiner."

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Please see the reply to the arguments above for claim 11. There are no set limits in displaying the images, the images are randomly displayed on the display until some actions are being taken (i.e., a third party is viewing the image).

On page 13 line 5 of the Remarks, there is a mention of MPEP 7067.07. Note the section of MPEP 7067.07 does not exist. Perhaps applicant meant to cite MPEP 706.07?

The remaining of the arguments is moot as Cox is withdrawn from the rejection as the claims do not recite "watermark." Therefore a prior art do not require "watermark" to be disclosed as it is not recited as the limitation in a claim.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 7, 11-12, 15, 18-19, 25 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tourai (US 6,784,887) in view of Abe (US 5,488,492).

With regard to **claim 1** Tourai discloses a method for displaying an image only to an authorized user (display 102, col. 1 lines 55-58, preventing images from a third party (i.e., unauthorized user)), comprising: generating a data image (image forming unit 103, and image generator 1003, col. 2 lines 43 and 48); generating a mask image (i.e., dummy image generator 1004 at col. 2 line 48), (*wherein the mask image is a negation of pixels of the data image*); selecting the data image or the mask image according to a select signal (col. 3 lines 11-17, col. 5 lines 28-36; selection between input image (i.e., normal mode)

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and dummy image (i.e., dummy mode)); and sequentially displaying the selected images on a display device (displaying on the display area 102, col. 4 lines 19-30) *(to provide a perceived gray image to an unauthorized user and displaying an output image only to an authorized user)*.

Tourai, does not expressly disclose the mask image as a negation of pixels of the data image and providing a perceived gray image to an unauthorized user. However, Tourai discloses the mask image (i.e., the dummy image) to be a mosaic pattern image or an edge extraction image. It would have been obvious matter of design choice to modify the Tourai's reference by having the mask image as a negation of the data image since applicant has not discloses that having the mask image as a negation of the data image solves any stated problem (specification on page 2 line 25 to page 3 lines 1-7) or is for any particular purpose (specification on page 1 line 9 to page 2 lines 1-2) and it appears that the 'dummy image' of Tourai would perform equally well with having a third party (i.e., unauthorized user) prevented from viewing the image data (as disclosed in Tourai: col. 6 lines 30-35).

Nevertheless, Abe discloses mask image as a negation of pixels of the data image and providing a perceived gray image to an unauthorized user. Abe discloses inverting the image (i.e., negating of pixels of the image) creating an inverting signal relative to that of the input signal at col. 4 lines 40-64. The inverted signal is being displayed on the screen 18c through the CRT 61, col. 4 line 65 to col. 5 lines 1-4. Abe also perceives this signal as gray image at col. 5 lines 5-12. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Abe with Tourai. The motivation for doing so is to prevent the unauthorized user from viewing the image data. By inverting the color components of the image signal and then perceiving the screen 18c uniformly gray, Abe determines that the conversion is complete as disclosed at col. 5 lines 5-12. Also, Tourai discloses in his modification section one (1) on col. 6 that any image can be used as a dummy image (emphasis added by the Examiner). So, it would have been obvious to use the inverted image from Abe as the dummy

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image in Tourai to meet the limitations of claim 1. Therefore, it would have been obvious to combine Hiroaki with Tourai to obtain the invention as specified in claim 1.

With regard to **claim 7** Abe discloses a color image and the negation is done independently for each color channel of the color image (col. 5 lines 25-52 where each color channels R, G, and B are inverted independently).

With regard to **claim 11** Tourai discloses select signal generated by a random generator (the select signal is randomly generating the image on the display unit until a third party (i.e., unauthorized user) is viewing the image, then the select signal make sure that the 'dummy' image is displayed).

With regard to **claim 12** Tourai discloses displaying images in pairs in random order at col. 4 lines 19-30 as normal and dummy image.

With regard to **claim 15** Abe discloses negating each pixel of the mask image (col. 4 lines 54-64); and sequentially displaying the selected pixels on a display device (displays screen 18c through the CRT 61).

**Claim 18** recites identical features as claim 11. Thus, arguments similar to that presented above for claim 11 is equally applicable to claim 18.

With regard to **claim 19** Abe discloses plurality of data images are provided in a video, and each of these images are negated to produce corresponding mask images at col. 4 lines 54-58 and col. 5 lines 25-43.

**Claim 25** recites identical features as claim 1 except claim 25 is an apparatus claim. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 25. Note the apparatus in Tourai's Figures 1-2.

With regard to **claim 27** Tourai discloses the data and mask images (dummy images) selected periodically (col. 3 lines 11-37).

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**Claim 28** recites identical features as claim 11. Thus, arguments similar to that presented above for claim 11 is equally applicable to claim 28.

With regard to **claim 29** Abe discloses image including plurality of pixels (it's obvious to one of ordinary skill in the art that image includes multiple pixels) and each pixel of the data image negated serially (col. 4 lines 41-64).

7. Claim 2-6, 10, 13-14, 16-17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tourai (US 6,784,887) in view of Abe (US 5,488,492) as applied to claims 1, 7, 11-12, 15, 18-19, 25 and 27-29 above, and further in view of Stern et al. (hereinafter, "Stern") (US 6,597,328).

With regard to **claim 2** Tourai (as modified by Abe) discloses all of the claimed subject matter as already discussed above in claim 1 and the arguments are not repeated herein, but are incorporated by reference. Neither Tourai nor Abe expressly disclose the shutter device as disclosed in claim 2. Stern discloses opening/shutting the optical shutter display device 20B as disclosed at col. 5 lines 38-43, col. 6 lines 6-33. Stern also discloses synchronizing the opening and shutting to the select signal at col. 7 lines 3-6, 21-33. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Stern with Abe and Tourai. The motivation for doing so is to provide an authorized user a private view of the private data simultaneous to which an unauthorized viewer can see only the bursts of obscuring light which stimulate the retina of the unauthorized viewer's eyes so that the unauthorized viewer cannot discern the content of the display as taught by Stern at col. 7 lines 49-61. Therefore, it would have been obvious to combine Stern with Abe and Tourai to obtain the invention as specified in claim 2.

With regard to **claim 3** Stern discloses polarizing lens at col. 5 lines 61 to col. 6 lines 1-5.

With regard to **claims 4 and 5** Stern discloses opening and shutting by a wire/wireless link at col. 4 lines 61-65.



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With regard to **claim 6** Stern discloses synchronization according to a phase (i.e., time) at col. 7 lines 21-33.

With regard to **claim 10** Stern discloses alternately selecting the data and mask images according to clock cycles at col. 7 lines 21-33.

With regard to **claim 13** Stern discloses random generator operating according to an internal seed value and a real-time supplied value (col. 9 lines 10-26).

With regard to **claim 14** Stern discloses random signals for opening and shutting the shutter devices for first and second signal and synchronizing these signals at Step 110 in Figure 5.

**Claim 16** recites identical features as claim 2. Thus, arguments similar to that presented above for claim 2 is equally applicable to claim 16. Please note that since the entire image is being displayed in the shutter device the pixel of the image are displayed as well.

With regard to **claim 17** Stern discloses alternately selecting the data and mask images according to clock cycles at col. 7 lines 21-33.

**Claim 26** recites identical features as claim 2. Thus, arguments similar to that presented above for claim 2 is equally applicable to claim 26.

8. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tourai (US 6,784,887) in view of Abe (US 5,488,492) as applied to claims 1, 7, 11-12, 15, 18-19, 25 and 27-29 above, and further in view of Hiroaki (US 6,661,425).

With regard to **claim 8** Tourai (as modified by Abe) discloses all of the claimed subject matter as already discussed above in claim 1 and the arguments are not repeated herein, but are incorporated by reference. Tourai discloses the image being a color image at col. 4 lines 37-50 but not specifically each color channel in details with gamma-correction. Hiroaki discloses gamma-correcting each color channel at col. 14 lines 31-36. At the time of the invention, it would have been obvious to a person of ordinary

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skill in the art to combine the teaching of Hiroaki with Tourai and Abe. The motivation for doing so is to negate each color channel (i.e., R, G, B) separately for better quality of the image by color tone correction for authorized user. Therefore, it would have been obvious to combine Hiroaki with Tourai and Abe to obtain the invention as specified in claim 8.

With regard to claim 9 Hiroaki discloses intensity in a range from 0 to 255 and outputs that as part of a mask image at col. 26 lines 58 to col. 27 lines 1-3.

### *Conclusion*

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shefali D. Patel whose telephone number is 571-272-7396. The examiner can normally be reached on M-F 8:00am - 5:00pm (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shefali D Patel  
Examiner  
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September 22, 2005

